Vernunft ist nicht egozentrisch – Humane Ökonomie als reale Möglichkeit

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Humane Ökonomie – selbstverständlicher Auftrag sozioökonomischer Bildung und Wissenschaft oder sozialromantische Utopie?
22./23.9.2022, HU Berlin

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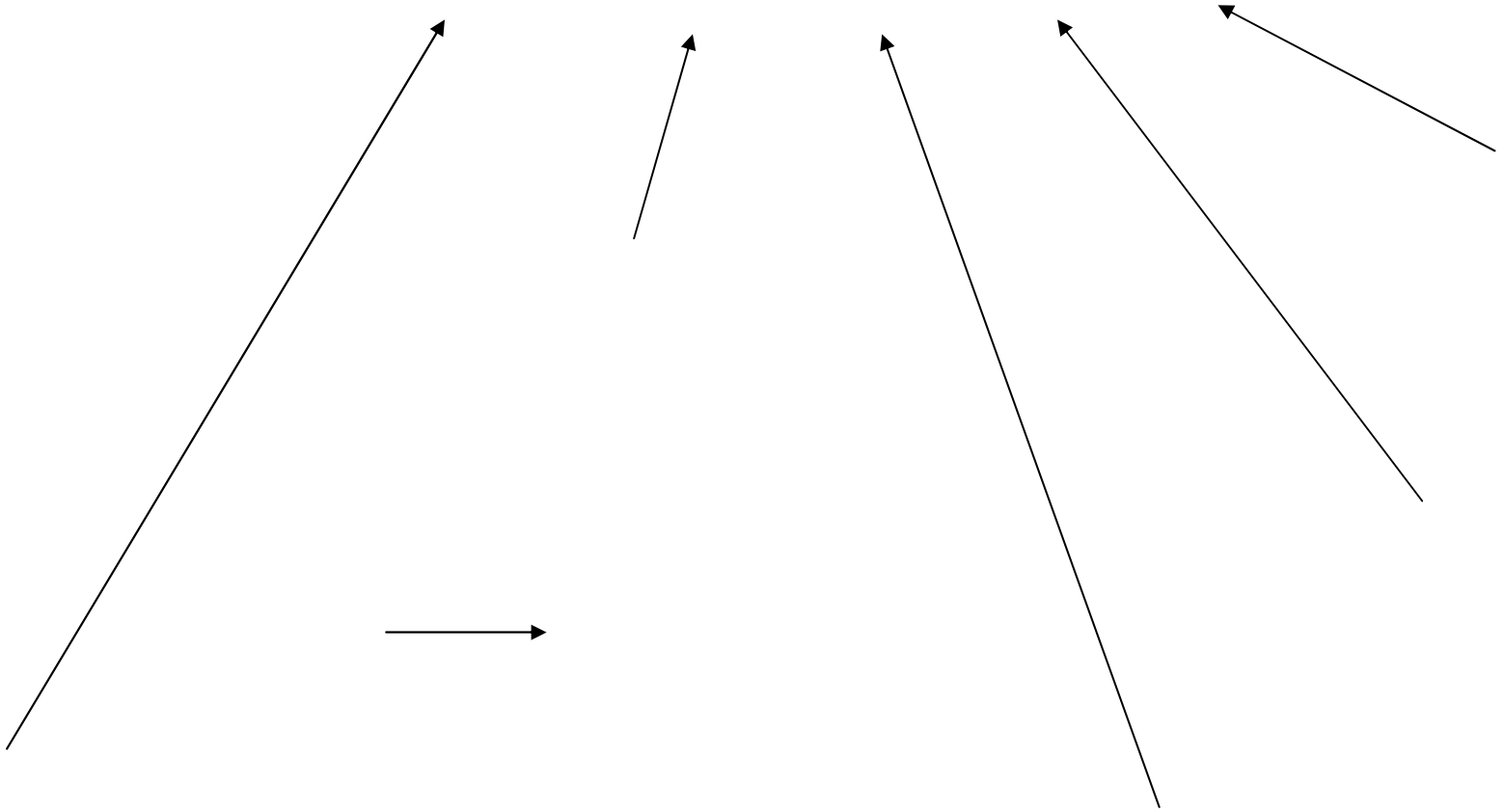


G 1 $p_1 + p_2 = p_3$ (Abgeschlossenheit)

G 2 $(p_1 + p_2) + p_3 = p_1 + (p_2 + p_3)$ (Distributivität)

G 3 $p_1 + n = p_1 = n + p_1$ (Neutrales Element)

G 4 $p_1 + (-p_1) = n$ (Inverses Element)

$$\mathcal{H}(q,p,t) := \left\{ \sum_{i=1}^{n} \dot{q}_i p_i \right\} - \mathcal{L}(q,\dot{q},t),$$

arrived at the 'adapted' condition (S. 5/7). If disturbed, its changes will show co-ordination of part with part (S. 5/12), and this co-ordination will hold over the whole system (S. 4/18). It follows that the behaviour of the 'animal'-part will be co-ordinated with the behaviour of *X* although the 'animal' has no immediate contact with it. (Example in S. 8/7.)

In the higher organisms, and especially in Man, the power to react correctly to something not immediately visible or tangible has been called 'imagination', or 'abstract thinking', or several other names whose precise meaning need not be discussed at the moment. Here we should notice that the co-ordination of

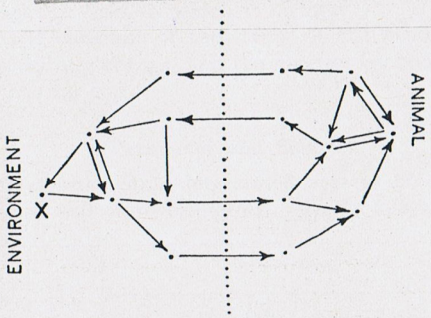


FIGURE 5/13/1.

the behaviour of one part with that of another part not in direct contact with it is simply an elementary property of the stable system.

5/14. Let us now re-state our problem in the new vocabulary. If, for brevity, we omit minor qualifications, we can state it thus: A determinate 'machine' changes from a form that produces chaotic, unadapted behaviour to a form in which the parts are so co-ordinated that the whole is stable, acting to maintain its essential variables within certain limits—how can this happen? For example, what sort of a thermostat could, if assembled at random, rearrange its own parts to get itself stable for temperature?

It will be noticed that the new statement involves the concept of a machine changing its internal organisation. So far, nothing has been said of this important concept; so it will be treated in the next chapter.

CHAPTER 6

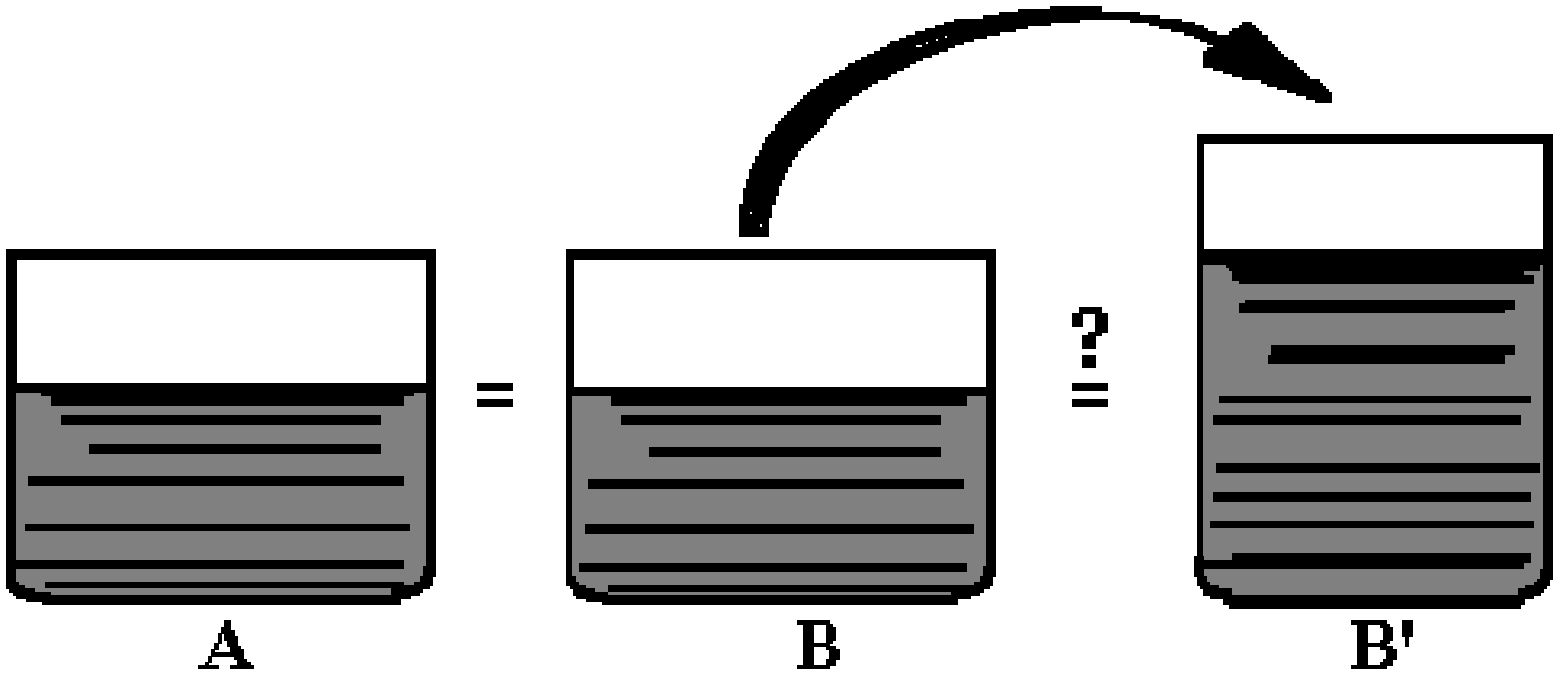
Parameters

6/1. So far, we have discussed the changes shown by the variables of a state-determined system, and have ignored the fact that all its changes occur on a background, or on a foundation, of constancies. Thus, a particular simple pendulum provides two variables which are known (S. 2/15) to be such that, if we are given a particular state of the system, we can predict correctly its ensuing behaviour; what has not been stated explicitly is that this is true only if the length of the string remains constant. The background, and these constancies, must now be considered.

Every system is formed by selecting some variables out of the totality of possible variables. 'Forming a system' means dividing the variables of the universe into two classes: those within the system and those without. These two types of variable are in no way different in their intrinsic physical nature, but they stand in very different relations to the system.

6/2. *Given a system, a variable not included in it is a* **parameter.** The word *variable* will, from now on, be reserved for one within the system.

In general, given a system, the parameters will differ in their closeness of relation to it. Some will have a direct relation to it: change of their value would affect the system to a major degree; such is the parameter 'length of pendulum' in its relation to the two-variable system of the previous section. Some are less closely related to it, their changes producing only a slight effect on it; such is the parameter 'viscosity of the air' in relation to the same system. And finally, for completeness, may be mentioned the infinite number of parameters that are without detectable effect on the system; such are the brightness of the light shining on the pendulum, the events in an adjacent room, and the events in the distant nebulae. Those without detectable effect may be ignored; but the relationship of an effective parameter to a system must be clearly understood.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